

**Work Order ID 69045**

Page 1

Wednesday, April 27, 2011 11:25:11 AM

<b>Item ID:</b>	D3391-023	<b>Accept</b>		<b>Setup</b>	<b>Start</b>			
<b>Revision ID:</b>						<b>Stop</b>		
<b>Item Name:</b>	Mid Tube Assembly							
<b>Start Date:</b>	4/27/2011	<b>Start Qty:</b>	1.00		<b>Cust Item ID:</b>			
<b>Required Date:</b>	5/3/2011	<b>Req'd Qty:</b>	1.00		<b>Customer:</b>			
<b>Reference:</b>								
<b>Approvals:</b>	Process Plan:	Date: 11-04-27	Tooling:	Date:		<b>Run</b>	<b>Start</b>	
QC:		Date: _____	SPC (Y/N):	Date: _____		<b>Stop</b>		

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Inspec Stamp
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Draw Nbr	Revision Nbr								
D3391	Rev H								

100	0.00								
-----	------	--	--	--	--	--	--	--	--

	Skidtubes								
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Skidtubes	<b>Memo</b>	0.00							
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Skidtubes	1-Cut tube to finish length as per Dwg D3391								
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2-Identify as D3391-023

3-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

5-Remove .030" from Fwd indexing Ridge as per Dwg D3391

6-Remove indexing ridge on Fwd &amp; Aft end of skidtube as per Dwg D3391

7-Deburr

8-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

9-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

10-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

BEN/05/16

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 69045**

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Wednesday, April 27, 2011 11:25:11 AM

Item ID: D3391-023

Accept



Setup Start



Revision ID:

Item Name: Mid Tube Assembly

Stop



Start Date: 4/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/3/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

11-Open .375" holes to .438" \*\*\*do not open fwd saddle holes\*\*\*

12-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

13- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drilled .188" dia hole, using t-pins and clicos to ensure perfect alignment, open up previously transferred pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021

14- Transfer drill 2 wearplate holes into D3391-021 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.

15- Locating from two fwd wearplate holes drill remaining 6 wearplate holes in D3391-021 using DT8937

16- Open 2 fwd wearplate holes in D3391-023 to .250" dia.

17- counterbore two aft wearplate holes in D3391-021 as per dwg

18- Open 12 wearplate holes in D3391-021 to 0.297" dia.

19-Deburr and blow out all chips from inside tube

BE 11/05/14

11-6-1

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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Cust Item ID:

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Customer:

Reference:

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Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

110



QC5- Inspect part completeness to step on W/O

0.00

8 h 10662

(4)

11/06/12

QC

Quality Control

120



Chemical Conversion Coat per QSI005 4.1

0.00

HandFinish

Hand Finishing

Memo

0.00

130



QC3- Inspect Part Finish

0.00

0.00

QC

Quality Control

Memo

W/O:		WORK ORDER CHANGES							
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Start Date: 4/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/3/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

140



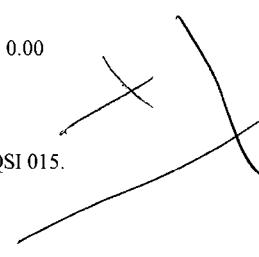
Skidtubes

Skidtubes

Memo

- 1-Open float bag holes as per dwg
  - 2-Sink float bag holes as per dwg
  - 3- Prepare tube for welding
  - 4-Bond web in place as per Dwg D3391 & QSI 015.
- Adhere for 12 hours)

A/R Sikaflex exp 116945  
batch#: 12/0115



1

BB 4/06/08

150



QC5- Inspect part completeness to step on W/O

QC

Quality Control

0.00

1 0 BE 4/06/06

160



Skidtubes

0.00

1 0 BE 4/06/06

Skidtubes

Memo

0.00

A/R m117456

ND 11-6-6

Skidtubes

- 1-Weld crossbolt spacer as per dwg D3391 & QSI 004
- 2-grind weld flush

W/O:		WORK ORDER CHANGES						
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Start Date: 4/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/3/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

0.00

0.00

0.00

0.00

0.00

170

QC10- Inspect visual per QSI004- ground welds



QC

Quality Control

S wloc loc

180

QC5- Inspect part completeness to step on W/O

0.00



QC

Quality Control

S wloc loc

185

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

AND REALODINE AS PER PAR09-043

X / m/11/06/06

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Stop



Start Date: 4/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/3/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190



Powdercoat

Powder Coating

M 116964

White Gloss(Ref.4.3.5.1) per QSI005 4.3-Alum

0.00

Memo

7:30 0.00  
320 °F  
8:00

1X J M-1 11/06/07

200



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

1 d 11 w/o 08

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

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Wednesday, April 27, 2011 11:25:12 AM

Item ID: D3391-023

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Setup Start



Revision ID:

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Stop



Start Date: 4/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/3/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210



Skidtubes

Skidtubes

0.00

1 4 81 also 108

Skidtubes

Memo

0.00

- 1- insert D3391-021 into D3391-23
- 2- insert T-pins into first and third fwd saddle holes
- 3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364
- 4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos
- 5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415
- 6- deburr, re-alodine and blow out chips
- 7- press fit D3591-1 spacers using DT9416 starting from 0.500" side

220



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

S. Wheeler

(4)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 69045**

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Wednesday, April 27, 2011 11:25:12 AM

Item ID: D3391-023

Accept



Setup Start



Revision ID:

Item Name: Mid Tube Assembly

Stop



Start Date: 4/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/3/2011 Req'd Qty: 1.00



Customer:

**Reference:**

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

**Sequence ID/  
Work Center ID**

230



HandFinish

**Operation  
Description**

HandFinishing

**Set Up/  
Run Hours**

0.00

Tool ID

Tool #

**Plan  
Code****Accept  
Qty****Reject  
Qty****Reject  
Number****Insp.  
Stamp**

Hand Finish

Hand Finishing

**Memo**

0.00

1 0 41 460608

240



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Soldering

0.00

RQ \_\_\_\_\_

250



Packaging

Packaging

Identify as per dwg & Stock Location: W10

0.00

0412-742-043/B69244

0.00

1 0 41 460608

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
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Wednesday, April 27, 2011 11:25:12 AM

Item ID: D3391-023

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Setup Start



Revision ID:

Item Name: Mid Tube Assembly

Stop



Start Date: 4/27/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 5/3/2011 Req'd Qty: 1.00



Customer:

Reference:

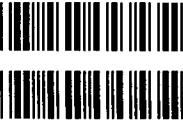
Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center ID

260



QC

Quality Control

Operation  
Description

QC21- Final Inspection - Work Order Release

Set Up/  
Run Hours

0.00

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInspec.  
Stamp

Memo

0.00

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date &amp; initial all entries

# Picklist Print

Page 1

Wednesday, April 27, 2011 11:25:17 AM

Work Order ID: 69045



Parent Item: D3391-023



Parent Item Name: Mid Tube Assembly

Start Date: 4/27/2011

Required Date: 5/3/2011

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP A 05.10.20 New Issue KJ/EC  
 IPP B 06.02.10 ECN773 dwg rev.D EC  
 IPP C 07.03.20 rev F dwg EC  
 IPP D 07.03.28 re-format EC  
 IPP E 07.10.31 ecn 1053P EC  
 IPP Rev:F ECN 1056 07-11-13 DD verified by: EC  
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC  
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC  
 IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP  
 Rev:J add in seq 140 expire date &# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2500-1-100



Manufactured

No

100

Each

96.0000

1

1

BE 1/06/16

Skidtube Extrusion

Location	Loc Qty	Loc Code
HALL	96	
37065	14	
50251	82	

D3391-021



Manufactured

No

100

Each

0.0000

1

1

(1) ND 11-6-1

Fwd Tube Assembly



Manufactured

No

140

Each

0.0000

1

1

BB 11/06/08

D3389-1



Manufactured

No

160

Each

9.0000

5

5

BE 11/06/06  
R 69516 x5

Web



Manufactured

No

160

Each

9.0000

5

5

D3681-1



Manufactured

No

160

Each

9.0000

5

5

Spacer



Location	Loc Qty	Loc Code
LG001	9	
65990	9	

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# Picklist Print

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Work Order ID: 69045



Parent Item: D3391-023



Parent Item Name: Mid Tube Assembly

Start Date: 4/27/2011

Required Date: 5/3/2011

Start Qty: 1.00

Required Qty: 1.00

D3591-1



Manufactured No

210

Each

59.0000

2

2



41 ulocelos

Bushing

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST068	59	
57350	22	
66147	37	

ALS4-1032-130



Purchased No

230

Each

1,784.000

20

20



41 ulocelos

Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST281	1784	
117331	1784	M117331

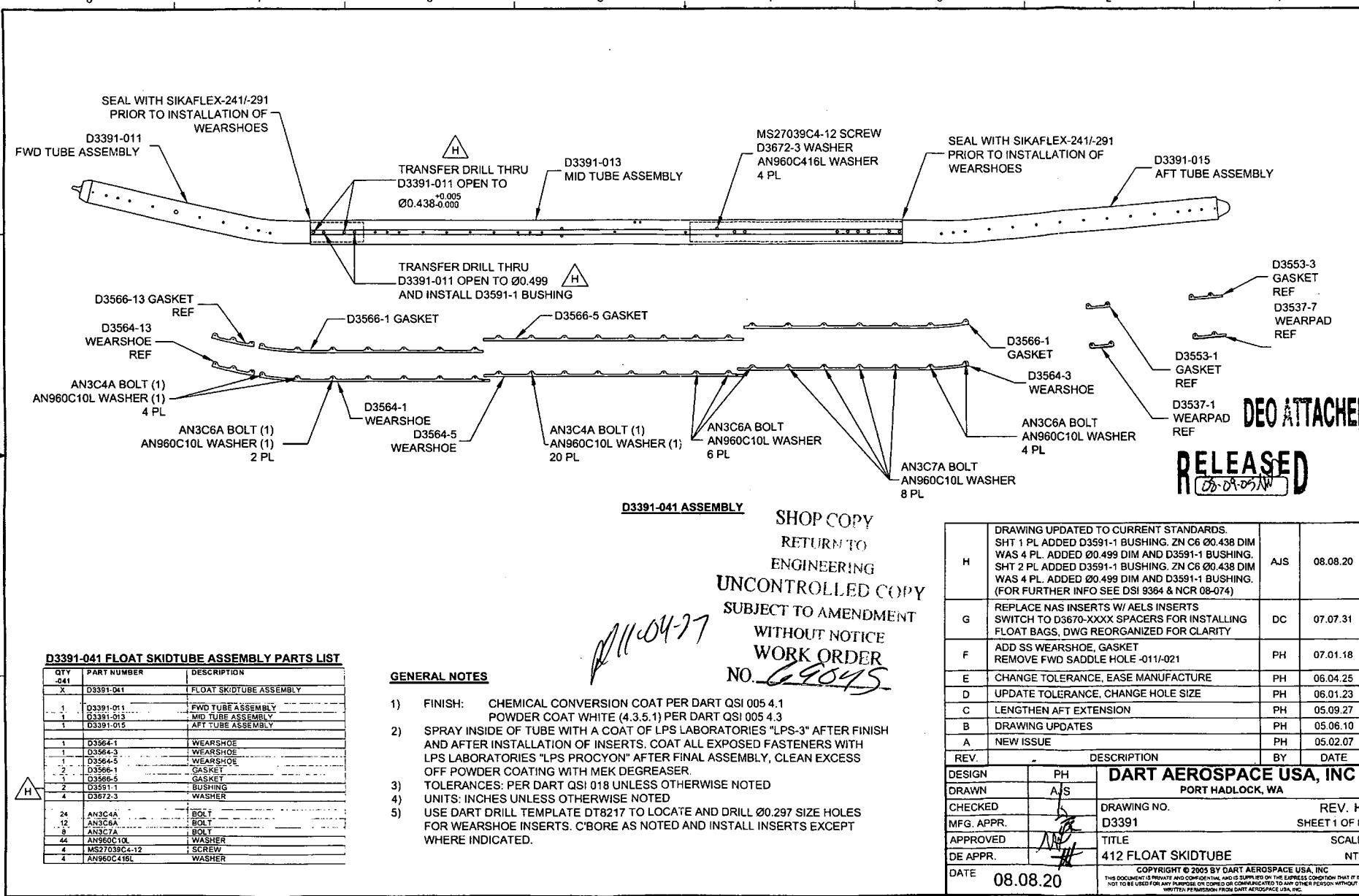
X20

W/O:		WORK ORDER CHANGES						
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NOTE: Date & initial all entries



11/04/27  
 H  
 SHOP COPY  
 RETURN TO  
 ENGINEERING  
 UNCONTROLLED COPY  
 SUBJECT TO AMENDMENT  
 WITHOUT NOTICE  
 WORK ORDER  
 NO. 29045

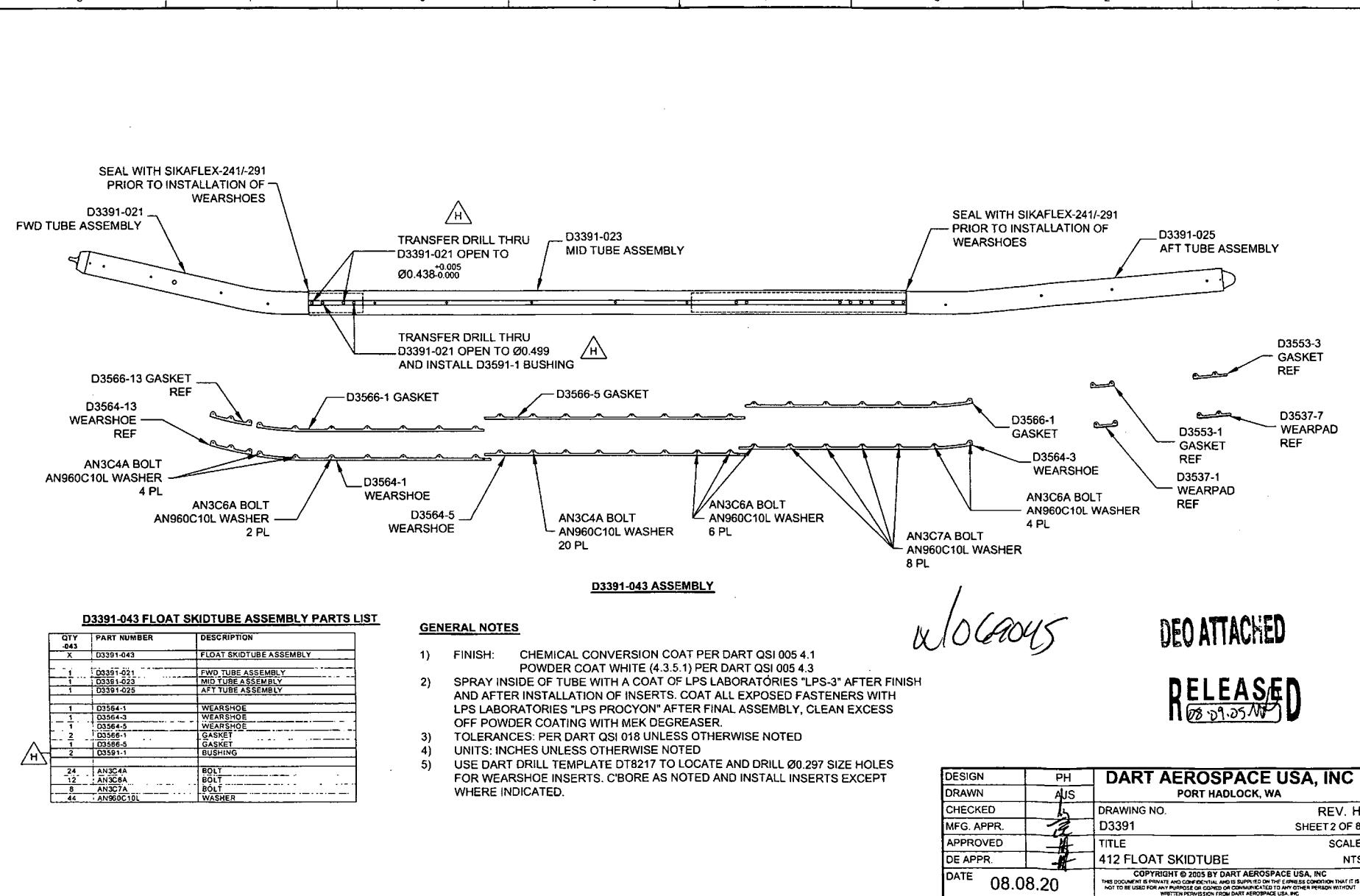
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DS1 9364 & NCR 08-074)		
H	AJS	08.08.20	B
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY		
F	DC	07.07.31	
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011-021		
E	PH	07.01.18	
D	PH	06.04.25	
C	PH	06.01.23	
B	PH	05.09.27	
B	PH	05.06.10	
A	PH	05.02.07	
REV.	DESCRIPTION		
DESIGN	PH	<b>DART AEROSPACE USA, INC</b> PORT HADLOCK, WA	
DRAWN	AS		
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES						
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DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

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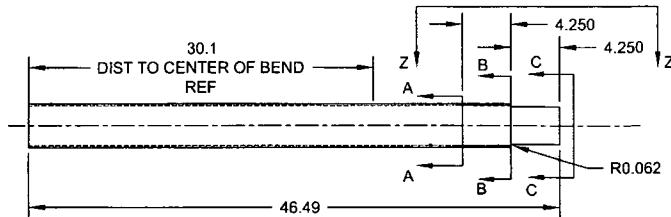
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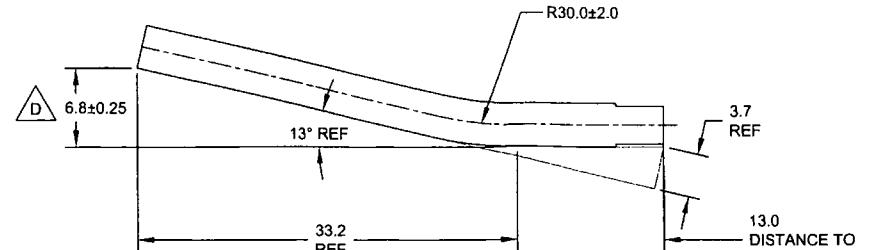
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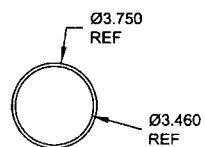
**D3391-1 CUTTING DETAIL**  
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



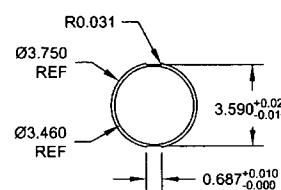
**D3391-011/-021 BENDING DETAIL**  
(MAKE FROM D3391-1)

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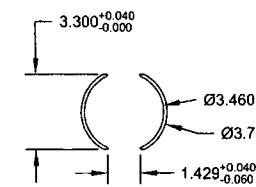
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**SECTION A-A**  
SCALE 2X



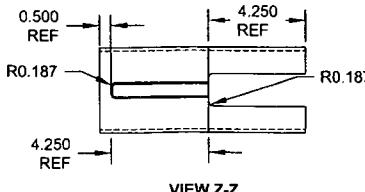
**SECTION B-B**  
SCALE 2X



**SECTION C-C**  
SCALE 2X

B

B



**VIEW Z-Z**  
SCALE 2X

DET ATTACHED

RELEASED  
*08.08.20*

DESIGN	PH	DART AEROSPACE USA, INC
DRAWN	AUS	PORT HADLOCK, WA
CHECKED	<i>AS</i>	DRAWING NO.
MFG. APPR.	<i>AS</i>	REV. H
APPROVED	<i>AS</i>	D3391
DE APPR.	<i>AS</i>	SHEET 3 OF 8
DATE	08.08.20	TITLE
		412 FLOAT SKIDTUBE
		NTS
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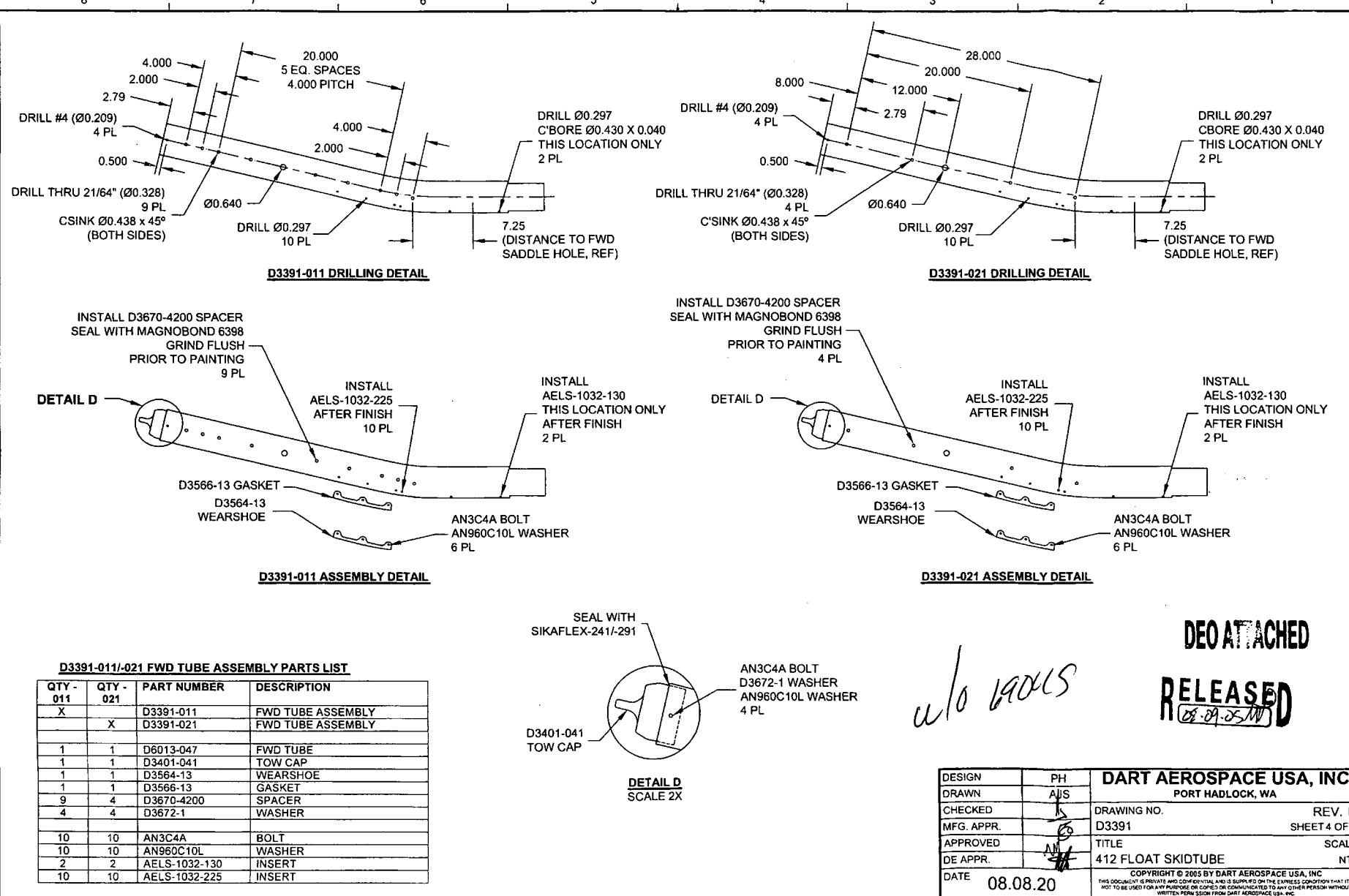
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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

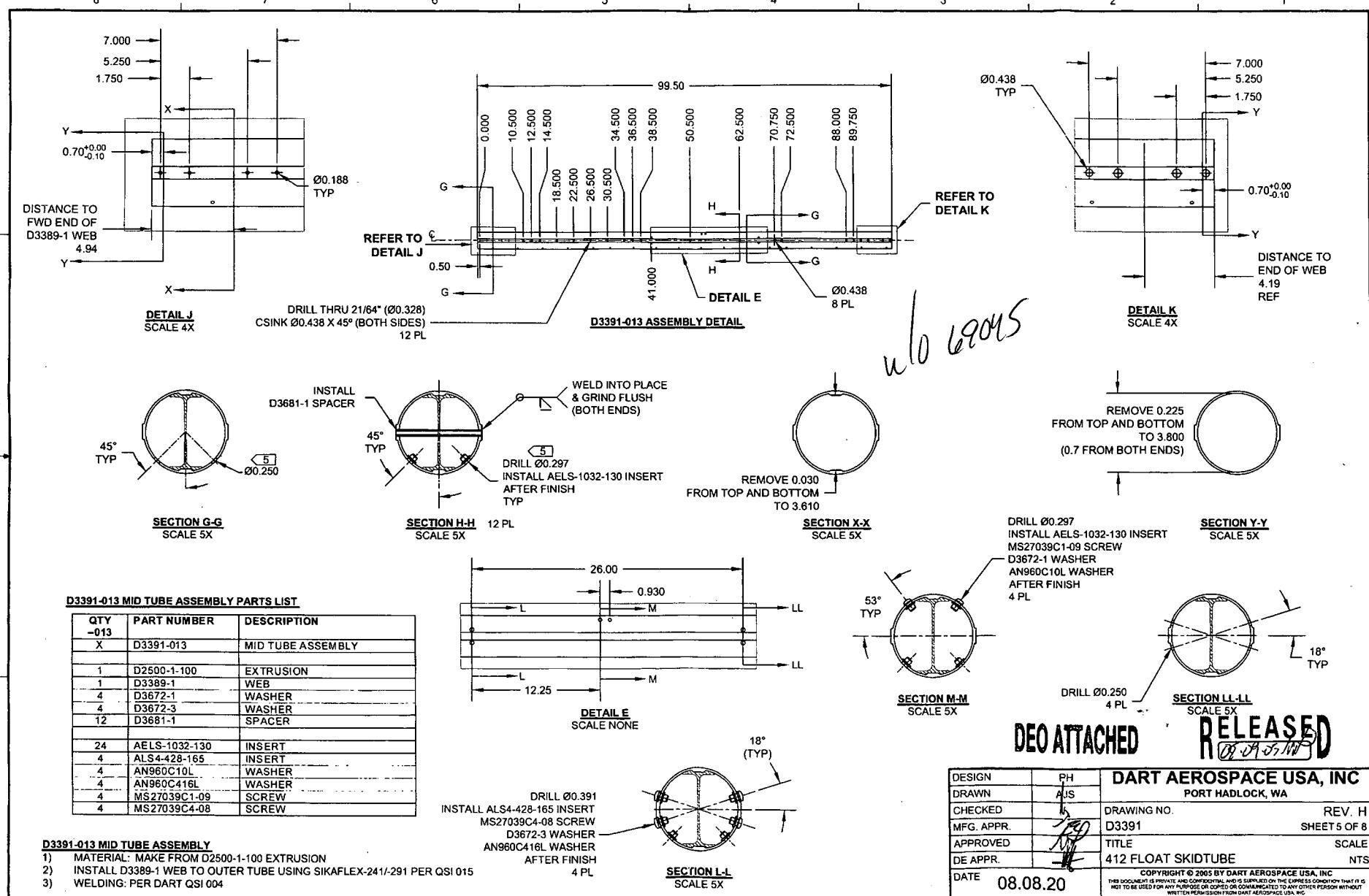


W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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DATE	STEP	Description of NC Section A	Corrective Action			Section B	Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

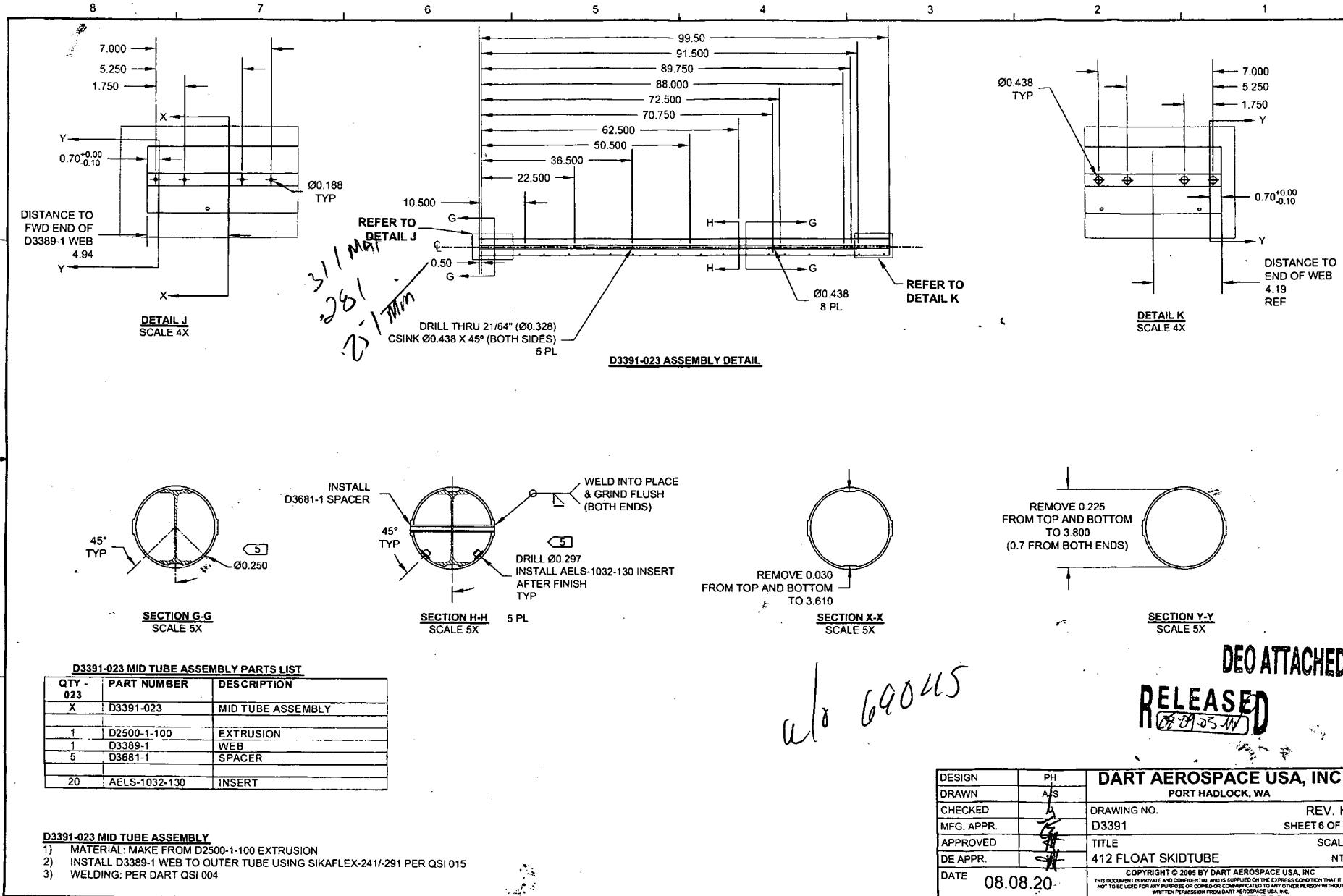


W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Description	Sign & Date			

NOTE: Date & initial all entries



DE ATTACHED

RELEASED  
08.08.20

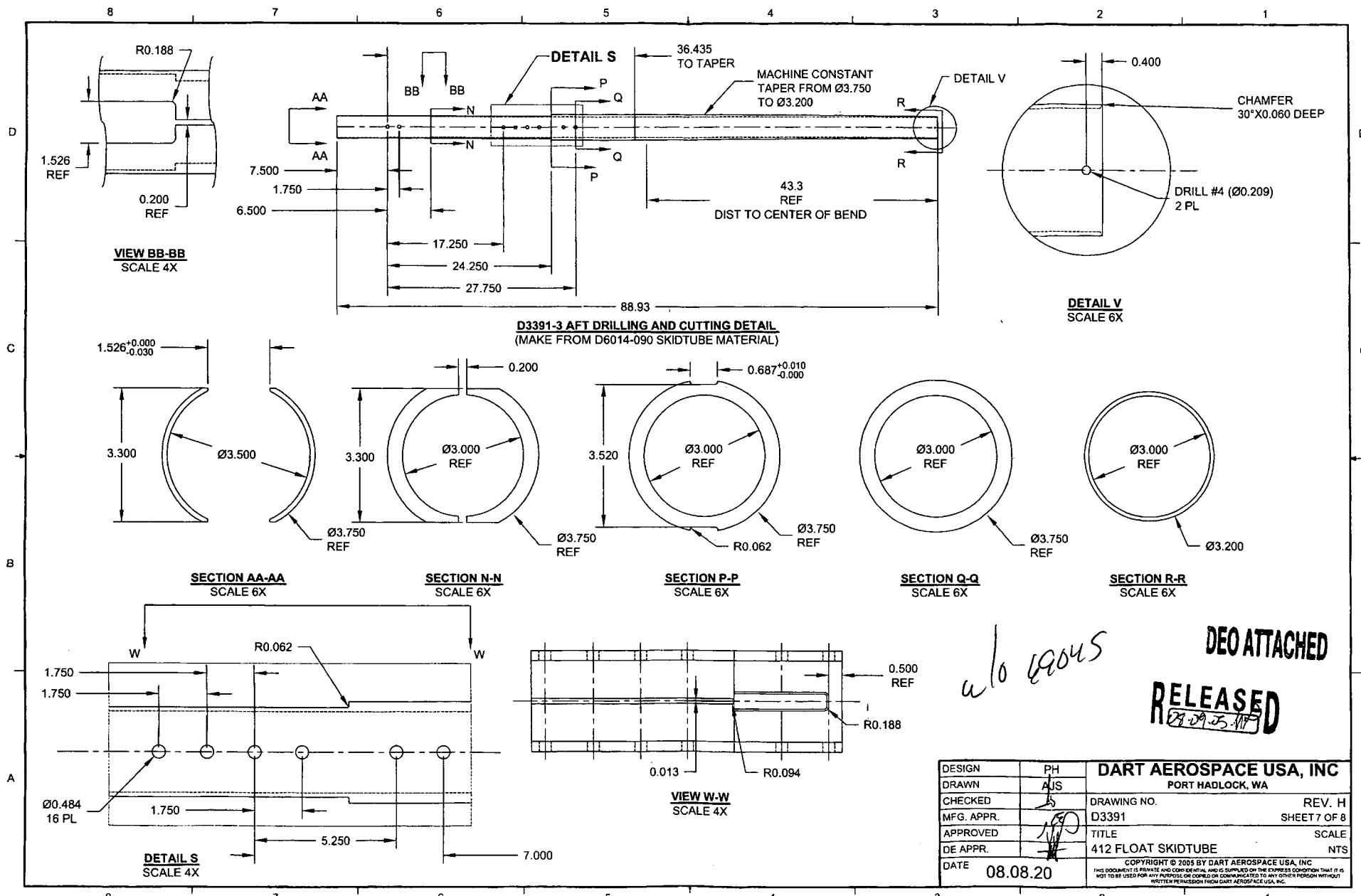
W 69045

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries



to 69045

**DEO ATTACHED**

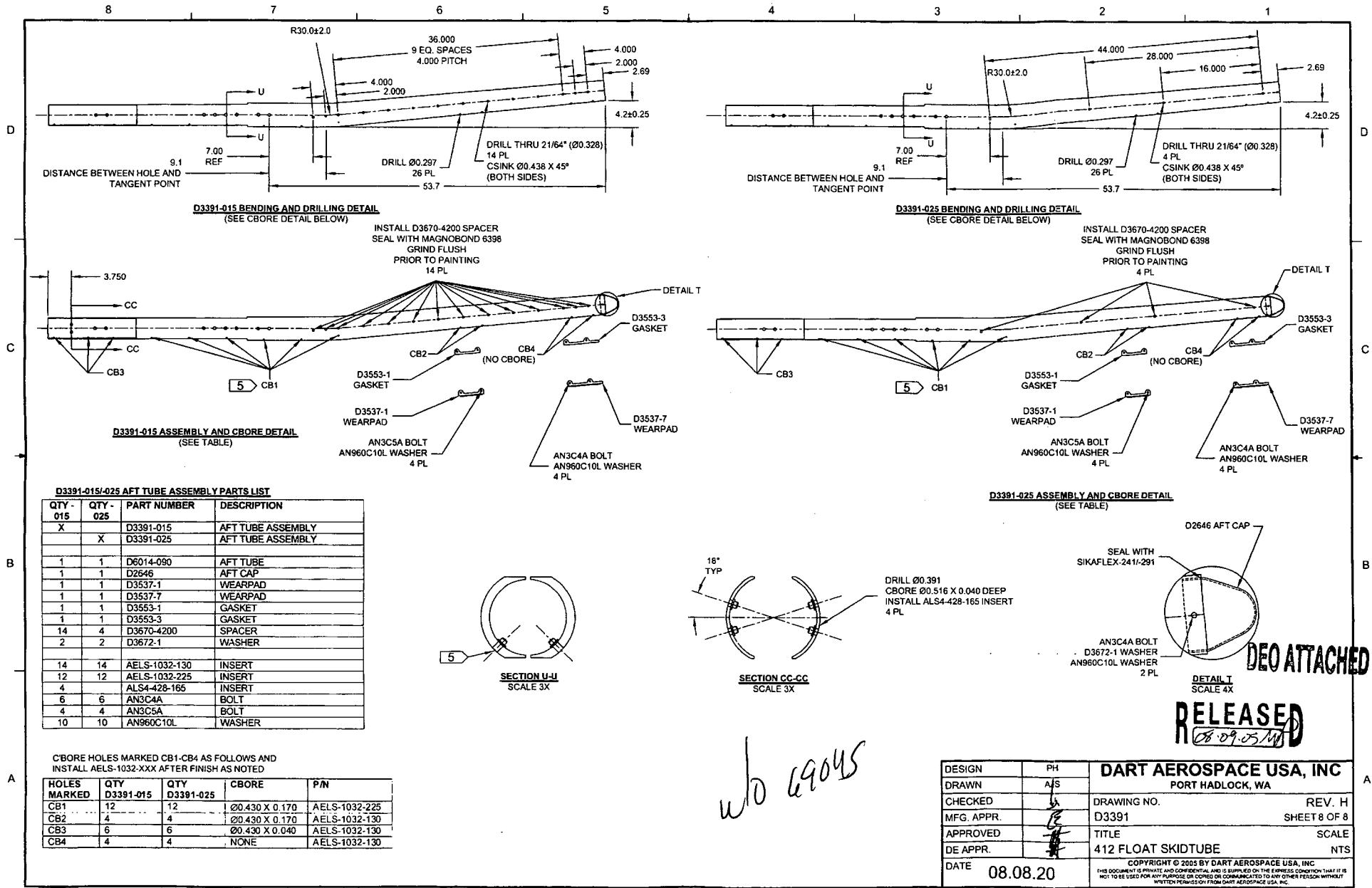
DESIGN	PH	DART AEROSPACE USA, INC		
DRAWN	AJS	PORT HADLOCK, WA		
CHECKED	<u>S</u>	DRAWING NO.	REV. H	
MFG. APPR.		D3391	SHEET 7 OF 8	
APPROVED	<u>NFO</u>	TITLE	SCALE	
DE APPR.	<u>W</u>	412 FLOAT SKIDTUBE	NTS	
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC		
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DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date &amp; initial all entries



W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date &amp; initial all entries

DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>J</i>	MFG. APPR. <i>M</i>	APPROVED <i>MD</i>	DE APPR. <i>H</i>		
DATE 09.09.23	DATE 09.09.24	DATE 09/09/25	DATE 09/09/30	DATE 09/09/30	DATE 09/09/30	

**PURPOSE:**

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

**CHANGE:**

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.~~ COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

**RELEASED**  
2010-02-02

*MP*

*u/o 68045*

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

NO. 4250

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 68679  
Part number: D3391 - 023  
Description: 3391  
Welding Process: Tig  Mig   
Base materiel:  
Current: AC  DC

TEST REQUIREMENTS AND RESULTS

Visual: pass  fail   
Penetration: pass  fail

UNACCEPTABLE

Cracks: pass  fail   
Undercut: pass  fail   
Pin holes: pass  fail   
Overlap (cold lap) pass  fail   
Porosity (surface): pass  fail   
Coloration: pass  fail

Qualifier J. H. Hens Date of Test Coupon 11-04-28

Welder Barclay Elliott Date of Test Coupon 11-04-28

The above named individual is qualified in accordance with AWS D17.1.2001 to weld